

What is claimed is:

1. A developing process on a press of a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, the process comprising the steps of:

(a) supplying dampening water to the planographic printing plate material with a recorded image mounted on a plate cylinder of a press by bringing a dampening roller into contact with the planographic printing plate material while rotating the plate cylinder; and

(b) then supplying ink to the planographic printing plate material by bringing an ink roller into contact with the planographic printing plate material to remove an image formation layer unnecessary for printing,

wherein in the step (a), the supplied amount of the dampening water is varied.

2. The developing process of claim 1, wherein the supplied amount of the dampening water at an initial stage of the step (a) is varied to be greater than that at a final stage of the step (a).

3. The developing process of claim 2, wherein the supplied amount of the dampening water at the initial stage

of the step (a) is from 30 to 200 ml/m² of the planographic printing plate material, and the supplied amount of the dampening water at the final stage of the step (a) is from 5 ml/m² to less than 30 ml/m² of the planographic printing plate material.

4. A developing process on a press of a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, the process comprising the steps of:

(a) supplying dampening water to a planographic printing plate material with a recorded image mounted on a plate cylinder of a press by bringing a dampening roller into contact with the planographic printing plate material while rotating the plate cylinder; and

(b) then supplying ink to the planographic printing plate material by bringing an ink roller into contact with the planographic printing plate material to remove an image formation layer unnecessary for printing,

wherein in the step (a), a circumferential speed of the plate cylinder (a distance which a point in the circumference of the plate cylinder advances in a unit time) is varied.

5. The developing process of claim 4, wherein in the step (a), the circumferential speed of the plate cylinder is varied in the range of from 0.5 to 3.0 m/second.

6. The developing process of claim 5, wherein at a certain period in the step (a), the circumferential speed of the plate cylinder is 2.0 to 3.0 m/second.

7. A developing process on a press of a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, the process comprising the steps of:

(a) supplying dampening water to a planographic printing plate material with a recorded image mounted on a plate cylinder of a press by bringing a dampening roller into contact with the planographic printing plate material while rotating the plate cylinder; and

(b) then supplying ink to the planographic printing plate material by bringing an ink roller into contact with the planographic printing plate material to remove an image formation layer unnecessary for printing,

wherein in the step (b), a circumferential speed of the plate cylinder is varied.

8. The developing process of claim 7, wherein in the step (b), the circumferential speed of the plate cylinder is varied in the range of from 0.5 to 3.0 m/second.

9. A developing process on a press of a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, the process comprising the steps of:

(a) supplying dampening water to a planographic printing plate material with a recorded image mounted on a plate cylinder of a press by bringing a dampening roller into contact with the planographic printing plate material while rotating the plate cylinder; and

(b) then supplying ink to the planographic printing plate material by bringing an ink roller into contact with the planographic printing plate material to remove an image formation layer unnecessary for printing,

wherein a circumferential speed of the plate cylinder in the step (a) is different from that in the step (b).

10. A printing process comprising the steps of:

developing a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of

being developed on a press, according to the developing process of claim 1 to prepare a planographic printing plate;

supplying ink and dampening water to the resulting planographic printing plate to form an ink image on the planographic printing plate; and

transferring the ink image to a paper sheet.

11. A printing process comprising the steps of:

developing a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, according to the developing process of claim 4 to prepare a planographic printing plate;

supplying ink and dampening water to the resulting planographic printing plate to form an ink image on the planographic printing plate; and

transferring the ink image to a paper sheet.

12. A printing process comprising the steps of:

developing a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, according to the developing process of claim 7 to prepare a planographic printing plate;

supplying ink and dampening water to the resulting planographic printing plate to form an ink image on the planographic printing plate; and

transferring the ink image to a paper sheet.

13. A printing process comprising the steps of:

developing a planographic printing plate material comprising a hydrophilic layer and an image formation layer, which is capable of being developed with water or capable of being developed on a press, according to the developing process of claim 9 to prepare a planographic printing plate;

supplying ink and dampening water to the resulting planographic printing plate to form an ink image on the planographic printing plate; and

transferring the ink image to a paper sheet.